Maya Martirossyan

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Education

2018 – 2024 *(expected)*	Ph.D. in Materials Science & Engineering (MSE), Cornell University Advisor: Julia Dshemuchadse	*Ithaca, NY*
2018 – 2021	M.S. in Materials Science & Engineering (MSE), Cornell University	*Ithaca, NY*
2013 – 2017	B.S. in Physics, Harvey Mudd College	*Claremont, CA*

Fellowships and Awards

2019 – 2024	National Science Foundation Graduate Research Fellowship
2021 – 2023	Dolores Zohrab Liebmann Fellowship
2022	DSOFT Travel Award, APS March Meeting
2021	Braslau Family Travel Grant, APS March Meeting
2019 – 2021	US Graduate Scholarship, Armenian General Benevolent Union
2020	Finalist for Paul and Daisy Soros Fellowship for New Americans
2019	Don & Lauren Morel Graduate Fellowship, Cornell MSE
2019	Rick & Betty Tsai Graduate Fellowship, Cornell MSE
2019	Ethel Jafarian Duffett Scholarship, Armenian International Women's Association

Publications

M. M. Martirossyan, M. Spellings, H. Pan, J. Dshemuchadse, "Emergent order during crystallization of complex structures tracked via an unsupervised machine learning order parameter," *manuscript in preparation.*

M. Spellings, **M. M. Martirossyan**, J. Dshemuchadse, "Self-supervised learning for ordered three-dimensional structures," *manuscript in preparation.*

R. N. Scott, C. E. Frank, **M. M. Martirossyan**, P. J. Milner, J. Dshemuchadse, "Finer coarse-grained simulation of 2D metal–organic frameworks synthesis with modulation," *manuscript in preparation.*

C. E. Cash, J. Wang, **M. M. Martirossyan**, B. K. Ludlow, A. E. Baptista, N. M. Brown, E. J. Weissler, J. Abacousnac, S. J. Gerbode, "Local melting attracts grain boundaries in colloidal polycrystals," *Physical Review Letters* 120, 018002 (2018). [doi:10.1103/PhysRevLett.120.018002]
Note: Editor's Suggestion and featured in APS *Physics.*

G. Guélou, **M. Martirossyan**, K. Ogata, I. Ohkubo, Y. Kakefuda, N. Kawamoto, Y. Kitagawa, J. Ueda, S. Tanabe, K. Maeda, K. Nakamura, T. Aizawa, T. Mori, "Rapid deposition and thermoelectric properties of ytterbium boride thin films using hybrid physical chemical vapor deposition," *Materialia* 1, 244-248 (2018). [doi:10.1016/j.mtla.2018.06.003]

E. L. Warren, E. A. Makoutz, T. Saenz, **M. Martirossyan**, A. Matheson, A. Neumann, A. G. Norman, A. C. Tamboli, J. D. Zimmerman, W. E. McMahon, "Enabling low-cost III-V/Si integration through nucleation of GaP on v-grooved Si substrates," *paper presented at* IEEE World Conference on Photovoltaic Energy Conversion (2018). [doi:10.1109/PVSC.2018.8547324]

Presentations

2022	"Demystifying complex crystal growth by classifying order in local environments." *MRS Fall Meeting*, November 27–December 2, Talk SB05.03.04.	*Boston, MA*
	"Decoding the growth of complex crystals via local structural analysis." *APS March Meeting*, March 14–18, Talk K25.00003.	*Chicago, IL*
2021	"Tracking the emergence of crystalline order *via* local structural analysis." *AIChE Annual Meeting*, November 7–11, Talk 438d.	*Boston, MA*
	"Local signatures of emerging global order in complex crystal growth." *APS March Meeting*, March 15–19, Talk V07.00006.	*Virtual*
2020	"Fabrication and self-assembly – growing crystal structures." *Cornell Nanoscale Facility Annual Meeting*, September 10, Invited talk.	*Virtual*
2017	"Probing colloidal grain boundary dynamics using a novel optical blasting technique." *APS March Meeting*, March 13–17, Talk S17.00002.	*New Orleans, LA*

Teaching

2022	**Instructor** for Cornell Prison Education Program (CPEP) MATH 112: Contemporary Mathematics	*Auburn, NY*
2022	**Instructor** for Cornell Prison Education Program (CPEP) MATH 112: Contemporary Mathematics	*Moravia, NY*
2022	**Contributor**, Cornell Center for Materials Research Lending Library	*Ithaca, NY*
2021	**Workshop leader**, TUMO Center for Creative Technologies "Simulating simple physics for complex problems"	*Yerevan, Armenia*
2021	**Guest lecturer**, Cornell University MSE 3040/5840: Kinetics, Diffusion, and Phase Transformations, MSE 5730: Probability, Statistics, and Data Analysis for the Physical Sciences	*Ithaca, NY*
2018	**Teaching assistant**, American University of Armenia ENGS 110: Introduction to Programming, CS 103: Real Analysis	*Yerevan, Armenia*

Leadership & Outreach

2023	**Volunteer**, APS Conference for Undergraduate Women in Physics	*Ithaca, NY*
2020–2022	**Event organizer**, REACT (Research Education and Activities for Community Teachers)	*Virtual/Ithaca, NY*
2020–	**Member**, MSE JEDI (Justice, Equity, Diversity, and Inclusion) Initiative	*Ithaca, NY*
2020	**Presenter**, NYS 4-H Career Explorations at Cornell	*Virtual*
2018–	**Volunteer**, Cornell Center for Materials Research (CCMR) Educational Programs	*Ithaca, NY*

Mentorship

Graduate mentees: Hongjin Du (2022–)
Undergraduate mentees: Sophia Janoyan (2021–), Nikki Hammond (2022, *co-advised*), Claire Frank (2020–2021), Joy Hendrix (2019–2020)